

**Polycarpon tetraphyllum (L.) L. (Caryophyllaceae)**  
**Four-leaved Allseed**

**Description.** Annual, mat-like, from a tap root; stems 3-17 cm long, spreading to prostrate, branched, glabrous. Leaves mostly opposite, often in pairs, appearing whorled, 3-12 mm long, oblong to obovate, entire, glabrous; stipules 2-3 mm long, lanceolate to triangular. Flowers ca. 2-2.5 mm long, in small terminal clusters; sepals ca. 2 mm long, lanceolate to ovate, strongly keeled, margins white, scarious; petals 5, linear to oblanceolate; stamens 3-5; ovary superior, with a 3-lobed style. Fruit a capsule; seeds several, surface granular, brown. In California, flowering from May to June. (Abrams 1944, Chater 1964, Clapham et al. 1962, Hartman 1993, Munz 1959, Wagner et al. 1990, Webb et al. 1988).

**Geographic distribution.** *Polycarpon tetraphyllum* is native to southern Europe and introduced in California, Asia, Africa, Australia, New Zealand, Hawaii, and South America (Arnold and de Wet 1993, Chapman 1991, Clapham et al 1962, Hartman 1993, Wagner et al. 1990, Webb et al. 1988). It apparently has not been reported from elsewhere in North America.

Although included by Watson (1880), all-seed was reported as “not yet known from California”. The earliest collections of *Polycarpon* were made in the late 1890s from a number of localities in central California (Robbins 1940). Naturalized populations occur on all the northern Channel islands (Junak et al. 1997). The species occurs in most counties west of the Sierra Nevada (Anonymous 1998).

**Reproductive and vegetative biology.** No literature was found on the reproductive and vegetative biology of *Polycarpon*. However, other members of Caryophyllaceae, with similar flowers, are generally self-compatible and pollinated by small insects (Proctor et al. 1996, Richards 1986).

**Ecological distribution.** Four-leaved Allseed occurs on sandy to clay soils of disturbed sites, roadsides, and waste places (Abrams 1944, Chater 1964, Clapham et al. 1962, Wagner et al. 1990, Webb et al. 1988).

**Weed status.** *Polycarpon tetraphyllum* is not considered a serious noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), nor is it considered a noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996). It is not listed for the United States in Lorenzi and Jeffery (1987).

**Microbial and insect pathogens.** No literature was found pertaining to microbial and insect pathogens.

**Herbicide control.** No literature was found that reported herbicide treatment.

### Literature Cited

- Abrams, L. (ed.) Illustrated flora of the Pacific states. Volume 2. Polygonaceae to Krameriaceae. Stanford University Press, Stanford, California. 635 pp.
- Anonymous. 1996. Exotic pest plants of greatest ecological concern in California as of August 1996. California Exotic Pest Plant Council. 8 pp.
- Anonymous. 1998. USDA Plants Database, Baton Rouge, LA. URL = [usda.plants.gov](http://usda.plants.gov).
- Arnold, T. and B. de Wet. 1993. Memoir 62. Plants of southern Africa: names and distribution. National Botanical Institute, Pretoria. 825 pp.
- Chapman, A. 1991. Australian plant name index. K-P. Australian Government Publishing Service, Canberra. pp. 1711-2495.
- Chater, A. 1964. *Polycarpon*. p. 153. In Tutin et al. (eds). Flora Europaea. Volume 1. Lycopodiaceae to Platanaceae. Cambridge University Press, Cambridge. 464 pp.
- Hartman, R. 1993. Caryophyllaceae. pp. 475-497. In J. Hickman (ed.) The Jepson Manual: higher vascular plants of California. University of California Press, Berkeley. 1400 pp.
- Junak, S., T. Ayers, R. Scott, D. Wilken, and D. Young. 1995. A flora of Santa Cruz Island. Santa Barbara Botanic Garden and California Native Plant Society, Santa Barbara and Sacramento. 397 pp.
- Munz, P. 1959. A flora of California. University of California Press, Berkeley. 1681 pp.
- Proctor, M., P. Yeo, and A. Lack. 1996. The Natural history of pollination. Timber Press, Portland, Oregon. 479 pp.
- Wagner, W., D. Herbst, and S. Sohmer. 1990. Manual of the flowering plants of Hawaii. 1853 pp.
- Watson, S. 1880. Geological Survey of California. Botany. Volume 2. John Wilson, University Press, Cambridge, Massachusetts. 559 pp.
- Webb, C., W. Sykes, and P. Garnock-Jones. 1988. Flora of New Zealand. Volume 4. Naturalized pteridophytes, gymnosperms, dicotyledons. Department of Scientific and Industrial Research, Christchurch. 1365 pp.